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EXAMINER	
PATEL, KAUSHIKKUMAR M	

ART UNIT	PAPER NUMBER
2188	

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/675,041	CHILTON, KENDELL A.	
	Examiner	Art Unit	
	Duc T. Doan	2188	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

Claims 1-10 are in the application.

Claims 1-10 are rejected.

Claim Objections

Claim 1 is objected to because of the following informalities:

As per claim 1, the "CRC" should not be abbreviated for the initial recital in the claims.

As per claim 2, the phrase "the method recited in claim 2" should be "the method recited in claim 1".

As per claim 3, line 7 the phrase "the second disk " lacks antecedent basis.

Appropriate correction is required.

Drawing

The drawings are objected to because:

A) The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. Figures in pages 1 to 6 contain handwriting that is unreadable.

B) The blocks named "memory" in Figures 1A, 1B need a block number identifier.

Specifications

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. (See specification's page 2 lines 8-15).

The Abstract should be a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. See MPEP 608.01(b).

The abstract is objected for the rationale as noted above.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

A person shall be entitled to a patent unless -

(a) the invention was known or used by other's in this country or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another fled in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 1-4 rejected under 35 U.S.C. 102 (a) as being anticipated by Talagala et al (US Pub 2002/0161972).

As for claim 1, Talagala describes a method for storing data and checking the validity of stored data when such stored data is read (Tagagala describes of using checksum to detect "silent error" page 3 paragraph 34; page 4 paragraph 35 describes the checksum will detect corrupt or stale data when the data is read), comprising: transmitting the data from a source thereof for storage in a first storage device and transmitting a CRC associated with such data for storage in a second, different storage device (Talagala's page 4 paragraph 39 lines 1-3 describes of storing the data and the checksum on separate devices; Talagala's pages 4-5 paragraph 35 describes the checksum can be computed vie variety of algorithms such as XOR,CRC etc..) retrieving the data stored in the first storage device; determining a CRC associated with the retrieved data; and comparing the determined CRC with the CRC stored in the second storage device (Talagala's page 4 paragraph 36 lines 4-8 describe checksum and data blocks are read, they are then compared).

As for claim 2, Talagala describes the claim recites wherein the first storage device is a disk drive (Talagala's Fig 4).

As for claim 3, the rationale in the rejection of claim 1 is incorporated herein. Talalaga describes a method for storing data on a disk drive and checking the validity of data read from such disk drive, comprising: transmitting the data from a source thereof for storage in the disk drive and transmitting a CRC associated with such data for storage in a different disk drive (Talagala's Fig 4); retrieving the data stored on the disk drive; determining a CRC associated with the retrieved data; and comparing the determined

CRC with the CRC stored in the second disk drive (Talagala's page 4 paragraph 36 lines 4-8 describe checksum and data blocks are read, they are then compared).

As for claim 4, Talagala describes wherein the second disk drive is a parity disk drive (Talagala's page 4 paragraphs 36-42 describe various implementations of checksum whereas the checksum can be XOR computation or in additional to the conventional RAID 5 architecture of XOR algorithm; Furthermore it has been known in the art that in RAID 5 the data blocks and the parity block (xor of data blocks) are stripped across all the physical disk drives; Thus the parity disk drive is not a physical drive but a functional drive mainly to obtain the separation of the parity block and data blocks. Talagala clearly taught in paragraph 39 that the checksum for each block is written separately from the data blocks, thus the checksum is functionally written in a parity disk drive.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Talagala et al (US Pub 2002/0161972) and in view of Weber (US 5596708).

As for claim 5, the rationale in the rejection of claim 1 is incorporated herein. Talagaga describes a method for storing data on a disk drive and checking the validity of data read from such disk drive, comprising: transmitting the data from a source thereof for storage in the disk drive through a first transmission path and transmitting a CRC associated with such data for storage in a storage medium through a second path separate from the disk drive; retrieving the data stored on the disk drive; determining a CRC associated with the retrieved data; and comparing the determined CRC with the CRC stored in the storage medium. Talagala does not describe the claim's aspect of the separate paths to the disk drives. However, Weber describes switches module that allows the host and drives to communicate through separate paths (Fig 3 bus switch upper, lower 400U 400L). It would have been obvious to one of ordinary skill in the art at the time of invention to include switches as suggested by Weber in Talagala's system to allow multiple paths connections among hosts and drives, thereby allowing operations to be performed between disk drives without the interfering with host or controller operation (Weber's column 6 lines 18-34).

Claims 6-7,9-10 rejected based on the same rationale as in the rejection of claim 4.

Claim 8 rejected based on the same rationale as in the rejection of claim 5.

Conclusion

When responding to the office action, Applicant is advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin L. Ellis
Primary Examiner

